

7. THAXTER, R. *On certain new or peculiar North American Hyphomycetes. II. Helicocephalum, Gonatorrhodiella, Desmidiospora nov. genera and Everhartia lignatilis n. sp.* Bot. Gaz. 16: 201-205. pl. 19. 1891.
8. VUILLEMIN, P. *Les Hypostomacees nouvelle famille de champignons parasites.* Bull. Soc. Sci. Nancy (2) 14: 15-67. 1896.
9. ZOPF, W. *Die Pilze.* In Schenk, A., *Handbuch der Botanik* 4: 271-781. Breslau. 1890.

ZOOLOGY.—*Some new land shells from Costa Rica and Panama.*<sup>1</sup> HARALD A. REHDER, U. S. National Museum.

The United States National Museum has received from time to time interesting collections of mollusks from Prof. Manuel Valerio, of San José, Costa Rica. Among these sendings several new species of land shells have turned up, which are herewith described. Similarly, the Museum has received a small but valuable collection of land shells from the Province of Chiriquí, Republic of Panama, from Mrs. Robert Adams Terry, among which are two forms that are diagnosed in this paper.

*Helicina terryae*, n. sp.

Figure 16

Shell small, subglobose, conic, thin but solid. Spire flesh colored, last whorl pale yellow; sculpture when fresh of irregular, oblique, and subspiral grooves on a surface smooth except for obscure growth wrinkles. When worn the shell appears to be sculptured with fine, crowded, wavy riblets or wrinkles, which in fresh shells of this and other species are seen to be part of the shell structure, visible through the periostracal layer. Whorls  $4\frac{3}{4}$ , only very slightly convex, suture finely impressed. Aperture oblique, broadly semicircular. Lip thickened, strongly reflexed, broadest in the peripheral region. Columella area thickened, finely granulose, the granulation extending more obscurely over the thin callus. No tooth at the base of the columella.

The type, U.S.N.M. no. 539026, measures: Height, 8.2 mm; diameter, 9.8 mm, and was collected in Chiriquí Province, Republic of Panama.

This little shell is named for the discoverer, Mrs. Robert Adams Terry. It resembles *H. tenuis* but is slightly more depressed and broader, with a broader aperture. The color is also quite distinctive.

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*Succinea haustrellum*, n. sp.

Figure 19

Shell broadly ovate, thin, pale straw yellow in color. Whorls 3, weakly convex, last one very large; suture impressed; sculpture consisting of axial growth wrinkles. Aperture ovate, patulous, columella forms a straight line with the parietal wall.

The type, U.S.N.M. no. 536013, was collected at Pedernal, Guanacaste Province, Costa Rica, at an altitude of 200 meters. It measures: Height, 13.1 mm; breadth, 8 mm.

A smaller paratype, U.S.N.M. no. 536014, is present, as well as two specimens, U.S.N.M. no. 536012, from San José, Costa Rica.

This species differs from the other Central American Succineas in having a shorter spire and larger aperture. The type has the edge of the outer lip somewhat broken.

*Spiraxis (Rectaxis) paulisculpta*, n. sp.

Figure 18

Shell small, cylindrical-turrite, glassy white to pale corneous, translucent, smooth, except for obscure irregular growth wrinkles. Whorls 8+, weakly convex, with a moderately deep, slightly overriding suture. Nuclear whorls not clearly demarcated from postnuclear whorls. First  $2\frac{1}{2}$  nuclear whorls smooth, remaining whorls very gradually widening, sculptured with irregular growth wrinkles. Aperture ovate-lanceolate. Outer lip thin, simple, slightly arcuate, almost vertical; columella straight, slightly oblique.

The type, U.S.N.M. no. 536016, measures: Height, 4 mm; diameter, 1.2 mm, and was collected at Santa María, San José Province, Costa Rica, at an altitude of 1,550 meters. U.S.N.M. no. 536017 contains 10 specimens from the same locality.

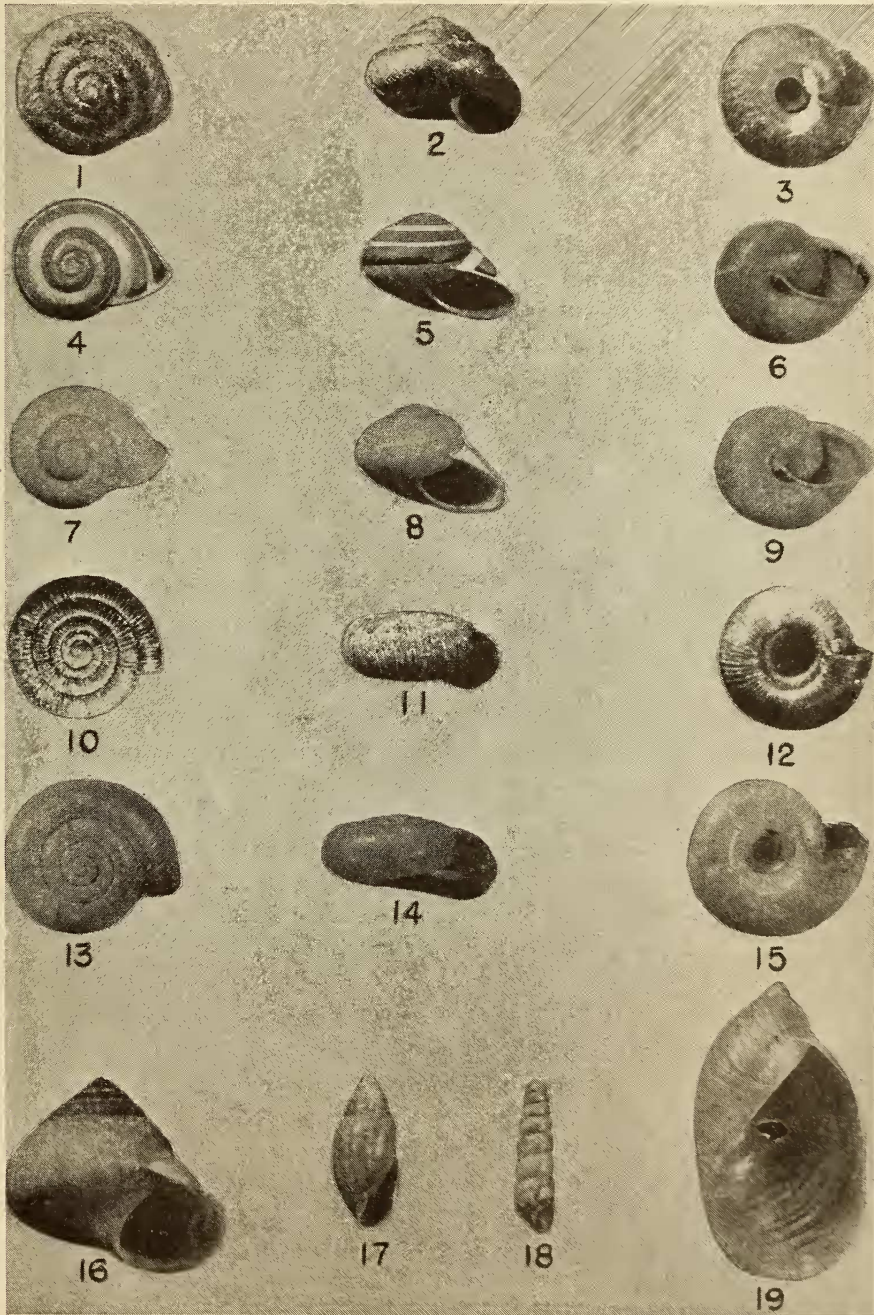
This species differs from all the mainland species of *Spiraxis* that I have noted by the weak development of sculpture on the whorls.

*Streptostyla (Streptostyla) valerioi*, n. sp.

Figure 17

Shell cylindric-ovate, golden-yellow when fresh, smooth except for very fine irregular

growth wrinkles. Nuclear whorls  $2\frac{3}{4}$ , rounded, separated by a very fine impressed suture. Postnuclear whorls 4, very slightly convex with an irregular, threadlike subsutural white



Figs. 1-19.—Land mollusks from Costa Rica and Panama. 1-3, *Thysanophora costaricensis*, n. sp.; 4-6, *Leptarionta venusta venusta* Gude; 7-9, *Leptarionta venusta albata*, n. subsp.; 10-12, *Rotadiscus pilsbryi*, n. sp.; 13-15, *Systrophia (Systrophella) costaricana*, n. sp.; 16, *Helicina terryae*, n. sp.; 17, *Streptostyla (Streptostyla) valerioi*, n. sp.; 18, *Spiraxis (Rectaxis) paulisculpta*, n. sp.; 19, *Succinea haustrellum*, n. sp.



band; last whorl subcylindric; suture rather irregular, very shallow. Aperture lanceolate, slightly less than half the length of the whole shell; outer lip arched forward in the middle. Columella strongly turrite.

The type, U.S.N.M. no. 536020, measures: Height, 20.2 mm; diameter, 9.1 mm; length of aperture, 10.5 mm, and comes from Cervantes, Cartago Province, Costa Rica, 1,480 meters.

U.S.N.M. no. 536021 contains a paratype from the same locality. Professor Valerio also sent two specimens from Tablazo, San José Province, Costa Rica (U.S.N.M. no. 536022), collected at 1,800 meters, and two specimens from La Verbena, San José Province, Costa Rica (U.S.N.M. no. 536024), collected at 1,000 meters. A specimen collected by Dr. W. M. Mann at Navarro, Cartago Province, Costa Rica (no. 365678) appears to belong here also.

*S. valerioi* differs from other *Streptostylas* of Panama and Costa Rica in its cylindrical shape and short aperture.

***Rotadiscus pilsbryi*, n. sp.**

Figures 10-12

Shell very small, discoid, horn colored, rather closely coiled, with flattened spire. The nucleus, of  $1\frac{3}{4}$  whorls, is smooth, glassy, while the remaining 3 whorls are sculptured with more or less equidistant axial ribs which have finer axial threads between them. Suture rather deep. Umbilicus rather broad, measuring about one-third of the diameter of the shell. Aperture crescentic; peristome simple, thin.

The type, U.S.N.M. no. 536018, measures: Height, 1 mm; greater diameter, 2.1 mm, and comes from Santa María, San José Province, Costa Rica, at an altitude of 1,550 meters.

U.S.N.M. no. 536019 contains four specimens from the same place.

From *Rotadiscus hermanni* Pfeiffer, Veracruz, Mexico, this species differs in being slightly larger and in having coarser sculpture, riblets being larger and more distantly spaced.

***Thysanophora costaricensis*, n. sp.**

Figures 1-3

Shell of medium size for the genus, moderately depressed, horn colored. Whorls  $4\frac{3}{4}$ , convex, somewhat flattened below the deeply impressed suture, last whorl descending slightly. Nuclear whorls  $1\frac{3}{4}$ , of which the first  $\frac{3}{4}$  whorl is smooth, the next whorl marked by evenly separated, retractive riblets. Postnuclear whorls marked by rather coarse, retractive, cuticular

riblets crossing the strong axial growth wrinkles. These retractive riblets are irregular and often interrupted, with comparatively wide interspaces. The umbilicus is deep and moderately large, contained about 4 times in the diameter of the shell; the walls of the umbilicus are sculptured with granules axially arranged along the growth lines. Aperture almost circular; lip simple, thin.

The type, U.S.N.M. no. 536009, measures: Height, 3.0 mm; diameter, 4.1 mm, and was collected at La Caja, near San José, San José Province, Costa Rica, at 1,000 meters.

Six specimens from the same locality are contained in U.S.N.M. no. 536010 and several specimens were collected at San José, Costa Rica, U.S.N.M. no. 536011.

This species resembles in shape *T. balboa* Pilsbry from Panama, which, however, is larger and has finer retractive riblets.

***Systrophia (Systrophiella) costaricana*, n. sp.**

Figures 13-15

Shell small, subdiscoid, spire slightly elevated, periphery rounded, thin, pale straw-yellow. Nuclear whorls almost 2, convex, smooth; postnuclear whorls  $2\frac{1}{2}$ , convex, smooth except for growth wrinkles; suture moderately deep. Umbilicus moderately narrow, measures less than one-third of the diameter of the shell. Aperture broadly lunate; peristome thin, simple.

The type, U.S.N.M. no. 536023, measures: Height, 3.7 mm; greater diameter, 7.7 mm, and was collected at Coto on the Golfo Dulce, Puntarenas Province, Costa Rica, at an altitude of 20 meters.

This species is geographically close to *S. (S.) zeteki* Pilsbry, from Panama, but is smaller, comparatively higher, with a more elevated spire and a smaller umbilicus. It likewise lacks the spiral striae of that species.

***Leptarionta venusta albata*, n. subsp.**

Figures 7-9

Like the typical form but completely white, except for a small chestnut area around the umbilical region; apex slightly greenish yellow.

The type, U.S.N.M. no. 536030, measures: Height, 14.2 mm, diameter, 20.4 mm, and was collected by Mrs. Terry in Chiriquí Province, Panama. Two other specimens from the same source are under U.S.N.M. no. 536031.

A specimen with the typical coloration, also collected by Mrs. Terry in Chiriquí, is depicted in Figs. 4-6.